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RAW SEQUENCE LISTING
ERROR REPORT

BIOTECHNOLOGY
SYSTEMS
BRANCH



9126

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/040,949
Source: OLPE
Date Processed by STIC: 9/18/2002

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

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FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE **CHECKER** **VERSION 3.1 PROGRAM**, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker>

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Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: U.S. Patent and Trademark Office, Box Sequence, P.O. Box 2327, Arlington, VA 22202
3. Hand Carry directly to:
U.S. Patent and Trademark Office, Technology Center 1600, Reception Area, 7th Floor, Examiner Name, Sequence Information, Crystal Mall One, 1911 South Clark Street, Arlington, VA 22202
Or
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Revised 01/29/2002



OIPE

RAW SEQUENCE LISTING
PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002
TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

3 <110> APPLICANT: Introgene BV
4 Havenga, Menzo
5 Vogels, Ronald
7 <120> TITLE OF INVENTION: Infection with chimaeric adenoviruses of cells negative
8 for the adenovirus serotype 5 Coxsacki adenovirus
9 receptor (CAR)
11 <130> FILE REFERENCE: 2183-52226US
13 <140> CURRENT APPLICATION NUMBER: 10/040,949
C--> 14 <141> CURRENT FILING DATE: 2002-09-09
16 <150> PRIOR APPLICATION NUMBER: WO01/04334
17 <151> PRIOR FILING DATE: 2000-07-07
19 <150> PRIOR APPLICATION NUMBER: EP 99202234.3
20 <151> PRIOR FILING DATE: 1999-07-08
22 <150> PRIOR APPLICATION NUMBER: US 60/142,557
23 <151> PRIOR FILING DATE: 2000-07-07
25 <160> NUMBER OF SEQ ID NOS: 58
27 <170> SOFTWARE: PatentIn version 3.1

*Does Not Comply
Corrected Diskette Needed*

*errors
throughout*

ERRORED SEQUENCES

94 <210> SEQ ID NO: 5
95 <211> LENGTH: 64
96 <212> TYPE: DNA
97 <213> ORGANISM: Artificial Sequence
99 <220> FEATURE:
100 <223> OTHER INFORMATION: Description of Artificial Sequence: primer
102 <220> FEATURE:
103 <221> NAME/KEY: misc_feature
104 <222> LOCATION: (1)..(64)
105 <223> OTHER INFORMATION: primer LRT-2
107 <400> SEQUENCE: 5
E--> 108 gcggatcctt cgaaccatgg taagcttggg accgctagcg ttaaccgggc ↑
109 gactcagtc
111 atcg
614 <210> SEQ ID NO: 30
615 <211> LENGTH: 377
616 <212> TYPE: PRT
617 <213> ORGANISM: adenoviridae
619 <220> FEATURE:
620 <221> NAME/KEY: VARIANT
621 <222> LOCATION: (1)..(377)
622 <223> OTHER INFORMATION: Serotype 8 fiber protein

60
60
64

*Move group of
bases up one
line. Move
cumulative
base total
up one line.*

*Cumulative base
total must be at
right margin
of each line.*

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

624 <400> SEQUENCE: 30

626 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 627

									1					5					10
630	Lys	Arg	Ala	Arg	Pro	Ser	Glu	Asp	Thr	Phe	Asn	Pro	Val	Tyr	Pro	Tyr			

631				20					25					30					
-----	--	--	--	----	--	--	--	--	----	--	--	--	--	----	--	--	--	--	--

634	Gly	Tyr	Ala	Arg	Asn	Gln	Asn	Ile	Pro	Phe	Leu	Thr	Pro	Pro	Phe	Val			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

635			35					40					45						
-----	--	--	----	--	--	--	--	----	--	--	--	--	----	--	--	--	--	--	--

638	Ser	Ser	Asn	Gly	Phe	Gln	Asn	Phe	Pro	Pro	Gly	Val	Leu	Ser	Leu	Lys			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

639		50					55					60							
-----	--	----	--	--	--	--	----	--	--	--	--	----	--	--	--	--	--	--	--

642	Leu	Ala	Asp	Pro	Ile	Thr	Ile	Asn	Asn	Gln	Asn	Val	Ser	Leu	Lys	Val			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

643	65					70				75					80				
-----	----	--	--	--	--	----	--	--	--	----	--	--	--	--	----	--	--	--	--

646	Gly	Gly	Gly	Leu	Thr	Leu	Gln	Glu	Glu	Thr	Gly	Lys	Leu	Thr	Val	Asn			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

647				85					90					95					
-----	--	--	--	----	--	--	--	--	----	--	--	--	--	----	--	--	--	--	--

650	Thr	Glu	Pro	Pro	Leu	His	Leu	Thr	Asn	Asn	Lys	Leu	Gly	Ile	Ala	Leu			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

651			100					105					110						
-----	--	--	-----	--	--	--	--	-----	--	--	--	--	-----	--	--	--	--	--	--

654	Asp	Ala	Pro	Phe	Asp	Val	Ile	Asp	Asn	Lys	Leu	Thr	Leu	Leu	Ala	Gly			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

655			115					120				125							
-----	--	--	-----	--	--	--	--	-----	--	--	--	-----	--	--	--	--	--	--	--

658	His	Gly	Leu	Ser	Ile	Ile	Thr	Lys	Glu	Thr	Ser	Thr	Leu	Pro	Gly	Leu			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

659		130					135					140							
-----	--	-----	--	--	--	--	-----	--	--	--	--	-----	--	--	--	--	--	--	--

662	Val	Asn	Thr	Leu	Val	Val	Leu	Thr	Gly	Lys	Gly	Ile	Gly	Thr	Asp	Leu			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 663

									145					150					155
--	--	--	--	--	--	--	--	--	-----	--	--	--	--	-----	--	--	--	--	-----

666	Ser	Asn	Asn	Gly	Gly	Asn	Ile	Cys	Val	Arg	Val	Gly	Glu	Gly	Gly	Gly			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 667

670	Leu	Ser	Phe	Asn	Asp	Asn	Gly	Asp	Leu	Val	Ala	Phe	Asn	Lys	Lys	Glu			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 671

674	Asp	Lys	Arg	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Thr	Ser	Pro	Asn	Cys	Arg			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 675

678	Ile	Asp	Gln	Asp	Lys	Asp	Ser	Lys	Leu	Thr	Leu	Val	Leu	Thr	Lys	Cys			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 679

682	Gly	Ser	Gln	Ile	Leu	Ala	Asn	Val	Ser	Leu	Ile	Val	Val	Ala	Gly	Arg			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 683

686	Tyr	Lys	Ile	Ile	Asn	Asn	Asn	Thr	Asn	Pro	Ala	Leu	Lys	Gly	Phe	Thr			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 687

690	Ile	Lys	Leu	Leu	Phe	Asp	Lys	Asn	Gly	Val	Leu	Met	Glu	Ser	Ser	Asn			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 691

694	Leu	Gly	Lys	Ser	Tyr	Trp	Asn	Phe	Arg	Asn	Gln	Asn	Ser	Ile	Met	Ser			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 695

698	Thr	Ala	Tyr	Glu	Lys	Ala	Ile	Gly	Phe	Met	Pro	Asn	Leu	Val	Ala	Tyr			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 699

702	Pro	Lys	Pro	Thr	Thr	Gly	Ser	Lys	Lys	Tyr	Ala	Arg	Asp	Ile	Val	Tyr			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 703

706	Gly	Asn	Ile	Tyr	Leu	Gly	Gly	Lys	Pro	His	Gln	Pro	Val	Thr	Ile	Lys			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 707

710	Thr	Thr	Phe	Asn	Gln	Glu	Thr	Gly	Cys	Glu	Tyr	Ser	Ile	Thr	Phe	Asp			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 711

714	Phe	Ser	Trp	Ala	Lys	Thr	Tyr	Val	Asn	Val	Glu	Phe	Glu	Thr	Thr	Ser			
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--

E--> 715

718	Phe	Thr	Phe	Ser	Tyr	Ile	Ala	Gln	Glu										
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	--	--	--	--	--	--	--	--	--	--

E--> 719

--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

*misaligned
amino acid
numbers. See
item 3 on Error
Summary Sheet.*

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

721 <210> SEQ ID NO: 31

722 <211> LENGTH: 377

723 <212> TYPE: PRT

724 <213> ORGANISM: adenoviridae

727 <220> FEATURE:

728 <221> NAME/KEY: VARIANT

729 <222> LOCATION: (1)..(377)

730 <223> OTHER INFORMATION: Serotype 9 fiber protein

732 <400> SEQUENCE: 31

734 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 735

same env

1

5

10

738 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr

739 20 25 30

742 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val

743 35 40 45

746 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys

747 50 55 60

750 Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asn Val Ser Leu Lys Val

751 65 70 75 80

754 Gly Gly Gly Leu Thr Leu Gln Asp Gly Thr Gly Lys Leu Thr Val Asn

755 85 90 95

758 Ala Asp Pro Pro Leu Gln Leu Thr Asn Asn Lys Leu Gly Ile Ala Leu

759 100 105 110

762 Asp Ala Pro Phe Asp Val Ile Asp Asn Lys Leu Thr Leu Leu Ala Gly

763 115 120 125

766 His Gly Leu Ser Ile Ile Thr Lys Glu Thr Ser Thr Leu Pro Gly Leu

767 130 135 140

770 Ile Asn Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Ser

771 145 150 155 160

774 Thr Asp Asn Gly Gly Ser Val Cys Val Arg Val Gly Glu Gly Gly Gly

775 165 170 175

778 Leu Ser Phe Asn Asn Asp Gly Asp Leu Val Ala Phe Asn Lys Lys Glu

779 180 185 190

782 Asp Lys Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys

783 195 200 205

786 Ile Asp Gln Asp Lys Asp Ser Lys Leu Thr Leu Val Leu Thr Lys Cys

787 210 215 220

790 Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val Val Ala Gly Lys

791 225 230 235 240

794 Tyr Lys Ile Ile Asn Asn Asn Thr Gln Pro Ala Leu Lys Gly Phe Thr

795 245 250 255

798 Ile Lys Leu Leu Phe Asp Glu Asn Gly Val Leu Met Glu Ser Ser Asn

799 260 265 270

802 Leu Gly Lys Ser Tyr Trp Asn Phe Arg Asn Glu Asn Ser Ile Met Ser

803 275 280 285

806 Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn Leu Val Ala Tyr

807 290 295 300

810 Pro Lys Pro Thr Ala Gly Ser Lys Lys Tyr Ala Arg Asp Ile Val Tyr

811 305 310 315 320

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

814 Gly Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Val Thr Ile Lys
 815 325 330 335
 818 Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile Thr Phe Asp
 819 340 345 350
 822 Phe Ser Trp Ala Lys Thr Tyr Val Asn Val Glu Phe Glu Thr Thr Ser
 823 355 360 365
 826 Phe Thr Phe Ser Tyr Ile Ala Gln Glu
 827 370 375

829 <210> SEQ ID NO: 32

830 <211> LENGTH: 391

831 <212> TYPE: PRT

832 <213> ORGANISM: adenoviridae

834 <220> FEATURE:

835 <221> NAME/KEY: VARIANT

836 <222> LOCATION: (1)..(391)

837 <223> OTHER INFORMATION: Serotype 13 fiber protein

839 <220> FEATURE:

840 <221> NAME/KEY: MISC_FEATURE

841 <222> LOCATION: (1)..(5)

842 <223> OTHER INFORMATION: 'Xaa' at positions 1-5 indicates an unidentified amino
 843 acid due to unidentified nucleotide(s)

845 <220> FEATURE:

846 <221> NAME/KEY: MISC_FEATURE

847 <222> LOCATION: (23)

848 <223> OTHER INFORMATION: 'Xaa' at position 23 indicates an unidentified amino acid
 849 due to unidentified nucleotide(s)

851 <220> FEATURE:

852 <221> NAME/KEY: MISC_FEATURE

853 <222> LOCATION: (41)

854 <223> OTHER INFORMATION: 'Xaa' at position 41 indicates an unidentified amino acid
 855 due to unidentified nucleotide(s)

857 <220> FEATURE:

858 <221> NAME/KEY: MISC_FEATURE

859 <222> LOCATION: (43)

860 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates an unidentified amino acid
 861 due to unidentified nucleotide(s)

863 <220> FEATURE:

864 <221> NAME/KEY: MISC_FEATURE

865 <222> LOCATION: (49)

866 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates an unidentified amino acid
 867 due to unidentified nucleotide(s)

869 <220> FEATURE:

870 <221> NAME/KEY: MISC_FEATURE

871 <222> LOCATION: (385)

872 <223> OTHER INFORMATION: 'Xaa' at position 385 indicates an unidentified amino acid
 873 due to unidentified nucleotide(s)

875 <400> SEQUENCE: 32

W--> 877 Xaa Xaa Xaa Xaa Xaa Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
 E--> 878

1

5

10

same error

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

W--> 881 Lys Arg Ala Arg Ser Ser Xaa Asp Thr Phe Asn Pro Val Tyr Pro Tyr
882 20 25 30
W--> 885 Gly Tyr Ala Arg Asn Gln Asn Ile Xaa Phe Xaa Thr Pro Pro Phe Val
886 35 40 45
W--> 889 Xaa Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
890 50 55 60
893 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Val
894 65 70 75 80
897 Gly Gly Gly Leu Thr Leu Gln Glu Gly Ser Leu Thr Val Asp Pro Lys
898 85 90 95
901 Ala Pro Leu Gln Leu Ala Asn Asp Lys Lys Leu Glu Leu Val Tyr Asp
902 100 105 110
905 Asp Pro Phe Glu Val Ser Thr Asn Lys Leu Ser Leu Lys Val Gly His
906 115 120 125
909 Gly Leu Lys Val Leu Asp Asp Lys Ser Ala Gly Gly Leu Lys Asp Leu
910 130 135 140
913 Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Ile Glu Asn
914 145 150 155 160
917 Leu Gln Asn Asp Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg
918 165 170 175
921 Leu Gly Thr Asp Gly Gly Leu Ser Phe Asp Arg Lys Gly Glu Leu Val
922 180 185 190
925 Ala Trp Asn Arg Lys Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
926 195 200 205
929 Pro Ser Pro Asn Cys Lys Ala Glu Thr Glu Lys Asp Ser Lys Leu Thr
930 210 215 220
933 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Thr Val Ser Ile
934 225 230 235 240
937 Ile Val Leu Lys Gly Lys Tyr Glu Phe Val Lys Lys Glu Thr Glu Pro
938 245 250 255
941 Lys Ser Phe Asp Val Lys Leu Leu Phe Asp Ser Lys Gly Val Leu Leu
942 260 265 270
945 Pro Thr Ser Asn Leu Ser Lys Glu Tyr Trp Asn Tyr Arg Ser Tyr Asp
946 275 280 285
949 Asn Asn Ile Gly Thr Pro Tyr Glu Asn Ala Val Pro Phe Met Pro Asn
950 290 295 300
953 Leu Lys Ala Tyr Pro Lys Pro Thr Lys Thr Ala Ser Asp Lys Ala Glu
954 305 310 315 320
957 Asn Lys Ile Ser Ser Ala Lys Asn Lys Ile Val Ser Asn Phe Tyr Phe
958 325 330 335
961 Gly Gly Gln Ala Tyr Gln Pro Gly Thr Ile Ile Ile Lys Phe Asn Glu
962 340 345 350
965 Glu Ile Asp Glu Thr Cys Ala Tyr Ser Ile Thr Phe Asn Phe Gly Trp
966 355 360 365
969 Gly Lys Val Tyr Asp Asn Pro Phe Pro Phe Asp Thr Thr Ser Phe Thr
970 370 375 380
W--> 973 Xaa Ser Tyr Ile Ala Gln Glu
974 385 390
976 <210> SEQ ID NO: 33

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

977 <211> LENGTH: 290

978 <212> TYPE: PRT

979 <213> ORGANISM: adenoviridae

981 <220> FEATURE:

982 <221> NAME/KEY: VARIANT

983 <222> LOCATION: (1)..(290)

984 <223> OTHER INFORMATION: Serotype 14 fiber protein

986 <400> SEQUENCE: 33

988 His Pro Phe Ile Asn Pro Gly Phe Ile Ser Pro Asn Gly Phe Thr Gln

E--> 989

same

1

5

10

992 Ser Pro Asp Gly Val Leu Thr Leu Lys Cys Leu Thr Pro Leu Thr Thr
 993 20 25 30
 996 Thr Gly Gly Ser Leu Gln Leu Lys Val Gly Gly Gly Leu Thr Val Asp
 997 35 40 45
 1000 Asp Thr Asp Gly Thr Leu Gln Glu Asn Ile Gly Ala Thr Thr Pro Leu
 1001 50 55 60
 1004 Val Lys Thr Gly His Ser Ile Gly Leu Ser Leu Gly Ala Gly Leu Gly
 1005 65 70 75 80
 1008 Thr Asp Glu Asn Lys Leu Cys Thr Lys Leu Gly Glu Gly Leu Thr Phe
 1009 85 90 95
 1012 Asn Ser Asn Asn Ile Cys Ile Asp Asp Asn Ile Asn Thr Leu Trp Thr
 1013 100 105 110
 1016 Gly Val Asn Pro Thr Glu Ala Asn Cys Gln Met Met Asp Ser Ser Glu
 1017 115 120 125
 1020 Ser Asn Asp Cys Lys Leu Ile Leu Thr Leu Val Lys Thr Gly Ala Leu
 1021 130 135 140
 1024 Val Thr Ala Phe Val Tyr Val Ile Gly Val Ser Asn Asn Phe Asn Met
 1025 145 150 155 160
 1028 Leu Thr Thr Tyr Arg Asn Ile Asn Phe Thr Ala Glu Leu Phe Phe Asp
 1029 165 170 175
 1032 Ser Ala Gly Asn Leu Leu Thr Ser Leu Ser Ser Leu Lys Thr Pro Leu
 1033 180 185 190
 1036 Asn His Lys Ser Gly Gln Thr Trp Leu Leu Val Pro Leu Leu Met Leu
 1037 195 200 205
 1040 Lys Val Ser Cys Pro Ala Gln Leu Leu Ile Leu Ser Ile Ile Ile Leu
 1041 210 215 220
 1045 Glu Lys Asn Lys Thr Thr Phe Thr Glu Leu Val Thr Thr Gln Leu Val
 1046 225 230 235 240
 1049 Ile Thr Leu Leu Phe Pro Leu Thr Ile Ser Val Met Leu Asn Gln Arg
 1050 245 250 255
 1053 Ala Ile Arg Ala Asp Thr Ser Tyr Cys Ile Arg Ile Thr Trp Ser Trp
 1054 260 265 270
 1057 Asn Thr Gly Asp Ala Pro Glu Gly Gln Thr Ser Ala Thr Thr Leu Val
 1058 275 280 285
 1061 Thr Ser
 1062 290
 1064 <210> SEQ ID NO: 34
 1065 <211> LENGTH: 345
 1066 <212> TYPE: PRT

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

1067 <213> ORGANISM: adenoviridae

1069 <220> FEATURE:

1070 <221> NAME/KEY: VARIANT

1071 <222> LOCATION: (1)..(345)

1072 <223> OTHER INFORMATION: Serotype 20 fiber protein

1074 <400> SEQUENCE: 34

1076 Ile Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly

E--> 1077

1080	Leu	Gln	Asn	Phe	Pro	Pro	Gly	Val	Leu	Ser	Leu	Lys	Leu	Ala	Asp	Pro
1081				20					25					30		
1084	Ile	Ala	Ile	Val	Asn	Gly	Asn	Val	Ser	Leu	Lys	Val	Gly	Gly	Gly	Ile
1085			35					40					45			
1088	Thr	Val	Glu	Gln	Asp	Ser	Gly	Gln	Leu	Ile	Ala	Asn	Pro	Lys	Ala	Pro
1089		50					55					60				
1092	Leu	Gln	Val	Ala	Asn	Asp	Lys	Leu	Glu	Leu	Ser	Tyr	Ala	Tyr	Pro	Phe
1093	65					70					75				80	
1096	Glu	Thr	Ser	Ala	Asn	Lys	Leu	Ser	Leu	Lys	Val	Gly	Gln	Gly	Leu	Lys
1097					85					90					95	
1100	Val	Leu	Asp	Glu	Lys	Asp	Ser	Gly	Gly	Leu	Gln	Asn	Leu	Leu	Gly	Lys
1101				100					105					110		
1104	Leu	Val	Val	Leu	Thr	Gly	Lys	Gly	Ile	Gly	Val	Glu	Glu	Leu	Lys	Asn
1105			115					120					125			
1108	Pro	Asp	Asn	Thr	Asn	Arg	Gly	Val	Gly	Ile	Asn	Val	Arg	Leu	Gly	Lys
1109		130					135						140			
1112	Asp	Gly	Gly	Leu	Ser	Phe	Asn	Lys	Asn	Gly	Glu	Leu	Val	Ala	Trp	Asn
1113	145					150					155				160	
1116	Lys	His	Asn	Asp	Thr	Gly	Thr	Leu	Trp	Thr	Thr	Pro	Asp	Pro	Ser	Pro
1117					165					170					175	
1120	Asn	Cys	Lys	Ile	Glu	Glu	Val	Lys	Asp	Ser	Lys	Leu	Thr	Leu	Val	Leu
1121				180					185					190		
1124	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Thr	Met	Ala	Phe	Gln	Val	Val
1125			195					200					205			
1128	Lys	Gly	Thr	Tyr	Glu	Asn	Ile	Ser	Lys	Asn	Thr	Ala	Lys	Asn	Ser	Phe
1129		210					215					220				
1132	Ser	Ile	Lys	Leu	Leu	Phe	Asp	Asp	Asn	Gly	Lys	Leu	Leu	Glu	Gly	Ser
1133	225					230					235				240	
1136	Ser	Leu	Asp	Lys	Asp	Tyr	Trp	Asn	Phe	Arg	Ser	Asp	Asp	Ser	Ile	Ile
1137				245						250					255	
1140	Pro	Asn	Gln	Tyr	Asp	Asn	Ala	Val	Pro	Phe	Met	Pro	Asn	Leu	Lys	Ala
1141			260					265						270		
1144	Tyr	Pro	Lys	Pro	Ser	Thr	Val	Leu	Pro	Ser	Thr	Asp	Lys	Asn	Ser	Asn
1145			275					280					285			
1148	Gly	Lys	Asn	Thr	Ile	Val	Ser	Asn	Leu	Tyr	Leu	Glu	Gly	Lys	Ala	Tyr
1149		290					295					300				
1152	Gln	Pro	Val	Ala	Val	Thr	Ile	Thr	Phe	Asn	Lys	Glu	Ile	Gly	Cys	Thr
1153	305					310						315			320	
1156	Tyr	Ser	Ile	Thr	Phe	Asp	Phe	Gly	Trp	Ala	Lys	Thr	Tyr	Asp	Val	Pro
1157				325						330					335	
1160	Ile	Pro	Phe	Asp	Ser	Ser	Ser	Phe	Thr							

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1161          340          345
1163 <210> SEQ ID NO: 35
1164 <211> LENGTH: 346
1165 <212> TYPE: PRT
1166 <213> ORGANISM: adenoviridae
1168 <220> FEATURE:
1169 <221> NAME/KEY: VARIANT
1170 <222> LOCATION: (1)..(346)
1171 <223> OTHER INFORMATION: Serotype 23 fiber protein
1173 <400> SEQUENCE: 35
1175 Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe
E--> 1176
      1          5          10
1179 Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
1180          20          25          30
1183 Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Thr
1184          35          40          45
1187 Val Glu Gln Asp Ser Gly Asn Leu Lys Val Asn Thr Lys Ala Pro Leu
1188          50          55          60
1191 Gln Val Ala Ala Asp Lys Gln Leu Glu Ile Ala Leu Ala Asp Pro Phe
1192 65          70          75          80
1195 Glu Val Ser Lys Gly Arg Leu Gly Ile Lys Ala Gly His Gly Leu Lys
1196          85          90          95
1199 Val Ile Asp Asn Ser Ile Ser Gly Leu Glu Gly Leu Val Gly Thr Leu
1200          100         105         110
1203 Val Val Leu Thr Gly His Gly Ile Gly Thr Glu Asn Leu Leu Asn Asn
1204          115         120         125
1207 Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg Leu Gly Lys Asp
1208          130         135         140
1211 Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val Ala Trp Asn Lys
1212 145         150         155         160
1215 Lys Tyr Asp Thr Arg Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn
1216          165         170         175
1219 Cys Lys Val Ile Glu Ala Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
1220          180         185         190
1223 Lys Cys Gly Ser Gln Ile Leu Ala Asn Met Ser Leu Leu Ile Leu Lys
1224          195         200         205
1227 Gly Thr Tyr Glu Tyr Ile Ser Asn Ala Ile Ala Asn Lys Ser Phe Thr
1228          210         215         220
1231 Ile Lys Leu Leu Phe Asn Asp Lys Gly Val Leu Met Asp Gly Ser Ser
1232 225         230         235         240
1235 Leu Asp Lys Asp Tyr Trp Asn Tyr Lys Ser Asp Asp Ser Val Met Ser
1236          245         250         255
1239 Lys Ala Tyr Glu Asn Ala Val Pro Phe Met Pro Asn Leu Lys Ala Tyr
1240          260         265         270
1243 Pro Asn Pro Thr Thr Ser Thr Thr Asn Pro Ser Thr Asp Lys Lys Ser
1244          275         280         285
1247 Asn Gly Lys Asn Ala Ile Val Ser Asn Val Tyr Leu Glu Gly Arg Ala
1248          290         295         300
1251 Tyr Gln Pro Val Ala Ile Thr Ile Thr Phe Asn Lys Glu Thr Gly Cys

```

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```

1252 305          310          315          320
1255 Thr Tyr Ser Met Thr Phe Asp Phe Gly Trp Ser Lys Val Tyr Asn Asp
1256          325          330          335
1259 Pro Ile Pro Phe Asp Thr Ser Ser Leu Thr
1260          340          345
1262 <210> SEQ ID NO: 36
1263 <211> LENGTH: 390
1264 <212> TYPE: PRT
1265 <213> ORGANISM: adenoviridae
1267 <220> FEATURE:
1268 <221> NAME/KEY: VARIANT
1269 <222> LOCATION: (1)..(390)
1270 <223> OTHER INFORMATION: Serotype 24 fiber protein
1273 <400> SEQUENCE: 36
1275 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

```

E--> 1276

	1	5	10
1279	Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr		
1280	20	25	30
1283	Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val		
1284	35	40	45
1287	Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys		
1288	50	55	60
1291	Leu Ala Asp Pro Ile Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val		
1292	65	70	75
1295	Gly Gly Gly Leu Thr Val Glu Lys Asp Ser Gly Asn Leu Lys Val Asn		
1296	85	90	95
1299	Pro Lys Ala Pro Leu Gln Val Thr Thr Asp Lys Gln Leu Glu Ile Ala		
1300	100	105	110
1303	Leu Ala Tyr Pro Phe Glu Val Ser Asn Gly Lys Leu Gly Ile Lys Ala		
1304	115	120	125
1307	Gly His Gly Leu Lys Val Ile Asp Lys Ile Ala Gly Leu Glu Gly Leu		
1308	130	135	140
1311	Ala Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn		
1312	145	150	155
1315	Leu Glu Asn Ser Asp Gly Ser Ser Arg Gly Val Gly Ile Asn Val Arg		
1316	165	170	175
1319	Leu Ala Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu Val		
1320	180	185	190
1323	Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp		
1324	195	200	205
1327	Pro Ser Pro Asn Cys Thr Ile Asp Gln Glu Arg Asp Ser Lys Leu Thr		
1328	210	215	220
1331	Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu		
1332	225	230	235
1335	Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn Pro		
1336	245	250	255
1339	Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly Val		
1340	260	265	270
1343	Leu Met Asp Ser Ser Thr Leu Lys Lys Glu Tyr Trp Asn Tyr Arg Asn		

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```

1344      275      280      285
1347 Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe Met
1348      290      295      300
1351 Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala Lys
1352 305      310      315      320
1355 Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn Val
1356      325      330      335
1359 Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys Phe
1360      340      345      350
1363 Asn Ala Glu Thr Glu Cys Ala Tyr Ser Ile Thr Phe Glu Phe Thr Trp
1364      355      360      365
1367 Ala Lys Thr Phe Glu Asp Val Gln Phe Asp Ser Ser Ser Phe Thr Phe
1368      370      375      380
1371 Ser Tyr Ile Ala Gln Glu
1372 385      390

```

1374 <210> SEQ ID NO: 37

1375 <211> LENGTH: 375

1376 <212> TYPE: PRT

1377 <213> ORGANISM: adenoviridae

1379 <220> FEATURE:

1380 <221> NAME/KEY: VARIANT

1381 <222> LOCATION: (1)..(375)

1382 <223> OTHER INFORMATION: Serotype 25 fiber protein

1384 <220> FEATURE:

1385 <221> NAME/KEY: MISC_FEATURE

1386 <222> LOCATION: (141)

1387 <223> OTHER INFORMATION: 'Xaa' at position 41 indicates an unidentified amino acid
 1388 due to unidentified nucleotide(s)

1390 <400> SEQUENCE: 37

1392 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 1393

```

      1      5      10
1396 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
1397      20      25      30
1400 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
1401      35      40      45
1404 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
1405      50      55      60
1408 Leu Ala Asp Pro Ile Thr Ile Ser Asn Gly Asp Val Ser Leu Lys Val
1409 65      70      75      80
1412 Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn
1413      85      90      95
1416 Pro Lys Ala Pro Leu Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala
1417      100      105      110
1420 Leu Ala Pro Pro Phe Asn Val Lys Asp Asn Lys Leu Asp Leu Leu Val
1421      115      120      125
1424 Gly Asp Gly Leu Lys Val Ile Asp Lys Ser Ile Ser Xaa Leu Pro Gly
1425      130      135      140
1428 Leu Leu Asn Tyr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu
1429 145      150      155      160

```

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Input Set : A:\Sequence Listing.txt

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```

1432 Glu Leu Lys Asn Asp Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val
1433                               165                               170                               175
1436 Arg Ile Gly Glu Gly Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu
1437                               180                               185                               190
1440 Val Ala Trp Asn Lys Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu
1441                               195                               200                               205
1444 Asp Pro Ser Pro Asn Cys Arg Ile Asp Val Asp Lys Asp Ser Lys Leu
1445                               210                               215                               220
1448 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
1449 225                               230                               235                               240
1452 Leu Leu Val Val Lys Gly Arg Phe Gln Asn Leu Asn Tyr Lys Thr Asn
1453                               245                               250                               255
1456 Pro Asn Leu Pro Lys Thr Phe Thr Ile Lys Leu Leu Phe Asp Glu Asn
1457                               260                               265                               270
1460 Gly Ile Leu Lys Asp Ser Ser Asn Leu Asp Lys Asn Tyr Trp Asn Tyr
1461                               275                               280                               285
1464 Arg Asn Gly Asn Ser Ile Leu Ala Glu Gln Tyr Lys Asn Ala Val Gly
1465                               290                               295                               300
1468 Phe Met Pro Asn Leu Ala Ala Tyr Pro Lys Ser Thr Thr Thr Gln Ser
1469 305                               310                               315                               320
1472 Lys Leu Tyr Ala Arg Asn Thr Ile Phe Gly Asn Ile Tyr Leu Asp Ser
1473                               325                               330                               335
1476 Gln Ala Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Gln Glu Ala
1477                               340                               345                               350
1480 Asp Ser Ala Tyr Ser Ile Thr Leu Asn Tyr Ser Trp Gly Lys Asp Tyr
1481                               355                               360                               365
1484 Glu Asn Ile Pro Phe Asp Ser
1485                               370                               375

```

1487 <210> SEQ ID NO: 38

1488 <211> LENGTH: 335

1489 <212> TYPE: PRT

1490 <213> ORGANISM: adenoviridae

1492 <220> FEATURE:

1493 <221> NAME/KEY: VARIANT

1494 <222> LOCATION: (1)..(335)

1495 <223> OTHER INFORMATION: Serotype 27 fiber protein

1497 <400> SEQUENCE: 38

1499 Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe Lys Asn

E--> 1500

same

```

1503 Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile Thr Ile
1504                               20                               25                               30
1507 Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Gly Leu Val Val Glu
1508                               35                               40                               45
1511 Lys Glu Ser Gly Lys Leu Ser Val Asp Pro Lys Thr Pro Leu Gln Val
1512                               50                               55                               60
1515 Ala Ser Asp Asn Lys Leu Glu Leu Ser Tyr Asn Ala Pro Phe Lys Val
1516 65                               70                               75                               80
1519 Glu Asn Asp Lys Leu Ser Leu Asp Val Gly His Gly Leu Lys Val Ile
1520                               85                               90                               95

```

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Input Set : A:\Sequence Listing.txt

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```

1523 Gly Asn Glu Val Ser Ser Leu Pro Gly Leu Ile Asn Lys Leu Val Val
1524           100           105           110
1527 Leu Thr Gly Lys Gly Ile Gly Thr Glu Glu Leu Lys Glu Gln Asn Ser
1528           115           120           125
1531 Asp Lys Ile Ile Gly Val Gly Ile Asn Val Arg Ala Arg Gly Gly Leu
1532           130           135           140
1535 Ser Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp Asn Pro Lys Tyr Asp
1536           145           150           155           160
1539 Thr Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys Met
1540           165           170           175
1543 Leu Thr Lys Lys Asp Ser Lys Leu Thr Leu Thr Leu Thr Lys Cys Gly
1544           180           185           190
1547 Ser Gln Ile Leu Gly Asn Val Ser Leu Leu Ala Val Ser Gly Lys Tyr
1548           195           200           205
1551 Leu Asn Met Thr Lys Asp Glu Thr Gly Val Lys Ile Ile Leu Leu Phe
1552           210           215           220
1555 Asp Arg Asn Gly Val Leu Met Gln Glu Ser Ser Leu Asp Lys Glu Tyr
1556           225           230           235           240
1559 Trp Asn Tyr Arg Asn Asp Asn Asn Val Ile Gly Thr Pro Tyr Glu Asn
1560           245           250           255
1563 Ala Val Gly Phe Met Pro Asn Leu Val Ala Tyr Pro Lys Pro Thr Ser
1564           260           265           270
1567 Ala Asp Ala Lys Asn Tyr Ser Arg Ser Lys Ile Ile Ser Asn Val Tyr
1568           275           280           285
1571 Leu Lys Gly Leu Ile Tyr Gln Pro Val Ile Ile Ile Ala Ser Phe Asn
1572           290           295           300
1575 Gln Glu Thr Thr Asn Gly Cys Val Tyr Ser Ile Ser Phe Asp Phe Thr
1576           305           310           315           320
1579 Cys Ser Lys Asp Tyr Thr Gly Gln Gln Phe Asp Val Thr Ser Phe
1580           325           330           335

```

1582 <210> SEQ ID NO: 39

1583 <211> LENGTH: 374

1584 <212> TYPE: PRT

1585 <213> ORGANISM: adenoviridae

1589 <220> FEATURE:

1590 <221> NAME/KEY: VARIANT

1591 <222> LOCATION: (1)..(374)

1592 <223> OTHER INFORMATION: Serotype 28 fiber protein

1594 <400> SEQUENCE: 39

1596 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 1597

```

          1           5           10
1600 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
1601           20           25           30
1604 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
1605           35           40           45
1608 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
1609           50           55           60
1612 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asp Val Ser Leu Lys Leu
1613           65           70           75           80

```

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Output Set: N:\CRF4\09182002\J040949.raw

```

1616 Gly Gly Gly Leu Thr Val Glu Lys Glu Ser Gly Asn Leu Thr Val Asn
1617      85      90      95
1620 Pro Lys Ala Pro Leu Gln Val Ala Ser Gly Gln Leu Glu Leu Ala Tyr
1621      100     105     110
1624 Tyr Ser Pro Phe Asp Val Lys Asn Met Leu Thr Leu Lys Ala Gly
1625      115     120     125
1628 His Gly Leu Ala Val Val Thr Lys Asp Asn Thr Asp Leu Gln Pro Leu
1629      130     135     140
1632 Met Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Gly Thr
1633 145      150     155     160
1636 Ser Ala His Gly Gly Thr Ile Asp Val Arg Ile Gly Lys Asn Gly Ser
1637      165     170     175
1640 Leu Ala Phe Asp Lys Asn Gly Asp Leu Val Ala Trp Asp Lys Glu Asn
1641      180     185     190
1644 Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser Pro Asn Cys Lys
1645      195     200     205
1648 Met Ser Glu Val Lys Asp Ser Lys Leu Thr Leu Ile Leu Thr Lys Cys
1649      210     215     220
1652 Gly Ser Gln Ile Leu Gly Ser Val Ser Leu Leu Ala Val Lys Gly Glu
1653 225      230     235     240
1656 Tyr Gln Asn Met Thr Ala Ser Thr Asn Lys Asn Val Lys Ile Thr Leu
1657      245     250     255
1660 Leu Phe Asp Ala Asn Gly Val Leu Leu Glu Gly Ser Ser Leu Asp Lys
1661      260     265     270
1664 Glu Tyr Trp Asn Phe Arg Asn Asn Asp Ser Thr Val Ser Gly Lys Tyr
1665      275     280     285
1668 Glu Asn Ala Val Pro Phe Met Pro Asn Ile Thr Ala Tyr Lys Pro Val
1669      290     295     300
1672 Asn Ser Lys Ser Tyr Ala Arg Ser His Ile Phe Gly Asn Val Tyr Ile
1673 305      310     315     320
1676 Asp Ala Lys Pro Tyr Asn Pro Val Val Ile Lys Ile Ser Phe Asn Gln
1677      325     330     335
1681 Glu Thr Gln Asn Asn Cys Val Tyr Ser Ile Ser Phe Asp Tyr Thr Cys
1682      340     345     350
1685 Ser Lys Glu Tyr Thr Gly Met Gln Phe Asp Val Thr Ser Phe Thr Phe
1686      355     360     365
1689 Ser Tyr Ile Ala Gln Glu
1690      370
1692 <210> SEQ ID NO: 40
1693 <211> LENGTH: 343
1694 <212> TYPE: PRT
1695 <213> ORGANISM: adenoviridae
1697 <220> FEATURE:
1698 <221> NAME/KEY: VARIANT
1699 <222> LOCATION: (1)..(343)
1700 <223> OTHER INFORMATION: Serotype 29 fiber protein
1702 <400> SEQUENCE: 40
1704 Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val Ser Ser Asp Gly Phe

```

E--> 1705

1

5

10

15

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```

1708 Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys Leu Ala Asp Pro Ile
E--> 1709      20      25      30
1712 Ala Ile Thr Asn Gly Asp Val Ser Leu Lys Val Gly Gly Leu Thr
E--> 1713      35      40      45
1716 Val Glu Gln Asp Ser Gly Asn Leu Ser Val Asn Pro Lys Ala Pro Leu
E--> 1717      50      55      60
1720 Gln Val Gly Thr Asp Lys Lys Leu Glu Leu Ala Leu Ala Pro Pro Phe
E--> 1721 65      70      75      80
1724 Asp Val Arg Asp Asn Lys Leu Ala Ile Leu Val Gly Asp Gly Leu Lys
E--> 1725      85      90      95
1728 Val Ile Asp Arg Ser Ile Ser Asp Leu Pro Gly Leu Leu Asn Tyr Leu
E--> 1729     100     105     110
1732 Val Val Leu Thr Gly Lys Gly Ile Gly Asn Glu Glu Leu Lys Asn Asp
E--> 1733     115     120     125
1736 Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val Arg Ile Gly Glu Gly
E--> 1737     130     135     140
1740 Gly Gly Leu Thr Phe Asp Asp Lys Gly Tyr Leu Val Ala Trp Asn Asn
E--> 1741 145     150     155     160
1744 Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu Asp Pro Ser Pro Asn
E--> 1745     165     170     175
1748 Cys Lys Ile Asp Ile Glu Lys Asp Ser Lys Leu Thr Leu Val Leu Thr
E--> 1749     180     185     190
1752 Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Ile Val Asn
E--> 1753     195     200     205
1756 Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp Pro Ser Leu Pro Lys
E--> 1757     210     215     220
1760 Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn Gly Val Leu Leu Glu
E--> 1761 225     230     235     240
1764 Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe Arg Ser Gly Asp Ser
E--> 1765     245     250     255
1768 Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly Phe Met Pro Asn Leu
E--> 1769     260     265     270
1772 Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser Lys Ile Tyr Ala Arg
E--> 1773     275     280     285
1776 Asn Thr Ile Tyr Gly Asn Ile Tyr Leu Asp Asn Gln Pro Tyr Asn Pro
E--> 1777     290     295     300
1780 Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala Asp Ser Ala Tyr Ser
E--> 1781 305     310     315     320
1784 Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr Asp Asn Ile Pro Phe
E--> 1785     325     330     335
1788 Asp Ser Thr Ser Phe Thr Ser
E--> 1789     340
1791 <210> SEQ ID NO: 41
1792 <211> LENGTH: 386
1793 <212> TYPE: PRT
1794 <213> ORGANISM: adenoviridae
1796 <220> FEATURE:
1797 <221> NAME/KEY: VARIANT
1798 <222> LOCATION: (1)..(386)

```

1799 <223> OTHER INFORMATION: Serotype 30 fiber protein
1801 <220> FEATURE:
1802 <221> NAME/KEY: MISC_FEATURE
1803 <222> LOCATION: (23)
1804 <223> OTHER INFORMATION: 'Xaa' at position 23 indicates unidentified amino acid due
1805 to unidentified nucleotide(s)
1807 <220> FEATURE:
1808 <221> NAME/KEY: MISC_FEATURE
1809 <222> LOCATION: (43)
1810 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates unidentified amino acid due
1811 to Unidentified nucleotide(s)
1813 <220> FEATURE:
1814 <221> NAME/KEY: MISC_FEATURE
1816 <222> LOCATION: (49)
1817 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates unidentified amino acid due
1818 to unidentified nucleotide(s)
1820 <220> FEATURE:
1821 <221> NAME/KEY: MISC_FEATURE
1822 <222> LOCATION: (97)
1823 <223> OTHER INFORMATION: 'Xaa' at position 97 indicates unidentified amino acid due
1824 to unidentified nucleotide(s)
1826 <220> FEATURE:
1827 <221> NAME/KEY: MISC_FEATURE
1828 <222> LOCATION: (152)
1829 <223> OTHER INFORMATION: 'Xaa' at position 152 indicates unidentified amino acid
1830 due to unidentified nucleotide(s)
1832 <220> FEATURE:
1833 <221> NAME/KEY: MISC_FEATURE
1834 <222> LOCATION: (186). (786)
1835 <223> OTHER INFORMATION: 'Xaa' at position 186 indicates unidentified amino acid
1836 due to unidentified nucleotide(s)
1838 <400> SEQUENCE: 41
1840 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

? only 186 amino acids in the sequence

	W-->	1844	Lys	Arg	Ala	Arg	Pro	Ser	Xaa	Asp	Thr	Phe	Asn	Pro	Val	Tyr	Pro	Tyr
E-->	1845					20					25					30		
W-->	1848	Gly	Tyr	Ala	Arg	Asn	Gln	Asn	Ile	Pro	Phe	Xaa	Thr	Pro	Pro	Phe	Val	
E-->	1849			35					40						45			
W-->	1852	Xaa	Ser	Asp	Gly	Phe	Lys	Asn	Phe	Pro	Pro	Gly	Val	Leu	Ser	Leu	Lys	
E-->	1853		50					55					60					
	1856	Leu	Ala	Asp	Pro	Ile	Ala	Ile	Thr	Asn	Gly	Asp	Val	Ser	Leu	Lys	Val	
E-->	1857	65				70						75				80		
	1860	Gly	Gly	Gly	Leu	Thr	Val	Glu	Gln	Asp	Ser	Gly	Asn	Leu	Ser	Val	Asn	
E-->	1861					85					90					95		
W-->	1864	Xaa	Lys	Ala	Pro	Leu	Gln	Val	Gly	Thr	Asp	Lys	Lys	Leu	Glu	Leu	Ala	
E-->	1865			100						105					110			
	1868	Leu	Ala	Pro	Pro	Phe	Asp	Val	Arg	Asp	Asn	Lys	Leu	Ala	Ile	Leu	Val	
E-->	1869			115					120					125				
	1872	Gly	Asp	Gly	Leu	Lys	Val	Ile	Asp	Arg	Ser	Ile	Ser	Asp	Leu	Pro	Gly	

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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

```

E--> 1873      130                      135                      140
W--> 1876 Leu Leu Asn Tyr Leu Val Val Xaa Thr Gly Lys Gly Ile Gly Asn Glu
E--> 1877 145                      150                      155                      160
      1880 Glu Leu Lys Asn Asp Gly Ser Asn Lys Gly Val Gly Leu Cys Val
E--> 1881                      165                      170                      175
W--> 1884 Arg Ile Gly Glu Gly Gly Leu Thr Xaa Asp Asp Lys Gly Tyr Leu
E--> 1885                      180                      185                      190
      1888 Val Ala Trp Asn Asn Lys His Asp Ile Arg Thr Leu Trp Thr Thr Leu
E--> 1889                      195                      200                      205
      1892 Asp Pro Ser Pro Asn Cys Lys Ile Asp Ile Glu Lys Asp Ser Lys Leu
E--> 1893                      210                      215                      220
      1896 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
E--> 1897 225                      230                      235                      240
      1900 Leu Ile Ile Val Asn Gly Lys Phe Lys Ile Leu Asn Asn Lys Thr Asp
E--> 1901                      245                      250                      255
      1904 Pro Ser Leu Pro Lys Ser Phe Asn Ile Lys Leu Leu Phe Asp Gln Asn
E--> 1905                      260                      265                      270
      1908 Gly Val Leu Leu Glu Asn Ser Asn Ile Glu Lys Gln Tyr Leu Asn Phe
E--> 1909                      275                      280                      285
      1912 Arg Ser Gly Asp Ser Ile Leu Pro Glu Pro Tyr Lys Asn Ala Ile Gly
E--> 1913                      290                      295                      300
      1916 Phe Met Pro Asn Leu Leu Ala Tyr Ala Lys Ala Thr Thr Asp Gln Ser
E--> 1917 305                      310                      315                      320
      1920 Lys Ile Tyr Ala Arg Asn Thr Ile Tyr Gly Asn Ile Tyr Leu Asp Asn
E--> 1921                      325                      330                      335
      1924 Gln Pro Tyr Asn Pro Val Val Ile Lys Ile Thr Phe Asn Asn Glu Ala
E--> 1925                      340                      345                      350
      1928 Asp Ser Ala Tyr Ser Ile Thr Phe Asn Tyr Ser Trp Thr Lys Asp Tyr
E--> 1929                      355                      360                      365
      1932 Asp Asn Ile Pro Phe Asp Ser Thr Ser Phe Thr Phe Ser Tyr Ile Ala
E--> 1933                      370                      375                      380
      1936 Gln Glu
E--> 1937 385
      1939 <210> SEQ ID NO: 42
      1940 <211> LENGTH: 391
      1941 <212> TYPE: PRT
      1942 <213> ORGANISM: adenoviridae
      1944 <220> FEATURE:
      1945 <221> NAME/KEY: VARIANT
      1946 <222> LOCATION: (1)..(391)
      1947 <223> OTHER INFORMATION: Serotype 32 fiber protein
      1949 <400> SEQUENCE: 42
      1951 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 1952
      1          5          10          15
      1955 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
E--> 1956                      20                      25                      30
      1959 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
E--> 1960                      35                      40                      45
      1963 Ser Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys

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RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

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E--> 1964      50              55              60
      1967 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val
E--> 1968 65              70              75              80
      1971 Gly Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn
E--> 1972              85              90              95
      1975 Pro Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr
E--> 1976              100             105             110
      1979 Ala Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly
E--> 1980              115             120             125
      1983 His Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp
E--> 1984              130             135             140
      1987 Leu Ile Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu
E--> 1988 145             150             155             160
      1991 Glu Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val
E--> 1992              165             170             175
      1995 Arg Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Leu
E--> 1996              180             185             190
      1999 Val Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro
E--> 2000              195             200             205
      2003 Asp Pro Ser Pro Asn Cys Thr Ile Asp Glu Glu Arg Asp Ser Lys Leu
E--> 2004              210             215             220
      2007 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser
E--> 2008 225             230             235             240
      2011 Leu Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Asn Thr Asn
E--> 2012              245             250             255
      2015 Pro Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly
E--> 2016              260             265             270
      2019 Val Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg
E--> 2020              275             280             285
      2023 Asn Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe
E--> 2024              290             295             300
      2027 Met Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala
E--> 2028 305             310             315             320
      2031 Lys Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn
E--> 2032              325             330             335
      2035 Val Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys
E--> 2036              340             345             350
      2039 Leu Asn Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr
E--> 2040              355             360             365
      2043 Trp Ala Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr
E--> 2044              370             375             380
      2047 Phe Ser Tyr Ile Ala Gln Glu
E--> 2048 385             390
      2050 <210> SEQ ID NO: 43
      2051 <211> LENGTH: 391
      2052 <212> TYPE: PRT
      2053 <213> ORGANISM: adenoviridae
      2055 <220> FEATURE:
      2056 <221> NAME/KEY: VARIANT

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RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

2057 <222> LOCATION: (1)..(391)

2058 <223> OTHER INFORMATION: Serotype 33 fiber protein

2060 <400> SEQUENCE: 43

2062 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 2063

										1		5			10	
2066	Lys	Arg	Ala	Arg	Pro	Ser	Glu	Asp	Thr	Phe	Asn	Pro	Val	Tyr	Pro	Tyr
2067				20					25					30		
2070	Gly	Tyr	Ala	Arg	Asn	Gln	Asn	Ile	Pro	Phe	Leu	Thr	Pro	Pro	Phe	Val
2071			35					40					45			
2074	Ser	Ser	Asp	Gly	Phe	Lys	Asn	Phe	Pro	Pro	Gly	Val	Leu	Ser	Leu	Lys
2075		50					55					60				
2078	Leu	Ala	Asp	Pro	Ile	Thr	Ile	Thr	Asn	Gly	Asp	Val	Ser	Leu	Lys	Val
2079	65					70					75				80	
2082	Gly	Gly	Gly	Leu	Thr	Leu	Gln	Glu	Gly	Ser	Leu	Thr	Val	Asn	Pro	Lys
2083				85						90					95	
2086	Ala	Pro	Leu	Gln	Leu	Ala	Asn	Asp	Lys	Lys	Leu	Glu	Leu	Val	Tyr	Asp
2087			100						105					110		
2090	Asp	Pro	Phe	Glu	Val	Ser	Thr	Asn	Lys	Leu	Ser	Leu	Lys	Val	Gly	His
2091			115					120						125		
2094	Gly	Leu	Lys	Val	Leu	Asp	Asp	Lys	Ser	Ala	Gly	Gly	Leu	Gln	Asp	Leu
2095		130					135					140				
2098	Ile	Gly	Lys	Leu	Val	Val	Leu	Thr	Gly	Lys	Gly	Ile	Gly	Ile	Glu	Asn
2099	145					150					155				160	
2102	Leu	Gln	Asn	Asp	Asp	Gly	Ser	Ser	Arg	Gly	Val	Gly	Ile	Asn	Val	Arg
2103				165						170					175	
2106	Leu	Gly	Thr	Asp	Gly	Gly	Leu	Ser	Phe	Asp	Arg	Lys	Gly	Glu	Leu	Val
2107			180						185					190		
2110	Ala	Trp	Asn	Arg	Lys	Asp	Asp	Arg	Arg	Thr	Leu	Trp	Thr	Thr	Pro	Asp
2111			195					200						205		
2114	Pro	Ser	Pro	Asn	Cys	Lys	Ala	Glu	Thr	Glu	Lys	Asp	Ser	Lys	Leu	Thr
2115		210				215						220				
2118	Leu	Val	Leu	Thr	Lys	Cys	Gly	Ser	Gln	Ile	Leu	Ala	Thr	Val	Ser	Ile
2119	225					230					235				240	
2122	Ile	Val	Leu	Lys	Gly	Lys	Tyr	Glu	Phe	Val	Lys	Lys	Glu	Thr	Glu	Pro
2123				245						250					255	
2126	Lys	Ser	Phe	Asp	Val	Lys	Leu	Leu	Phe	Asp	Ser	Lys	Gly	Val	Leu	Leu
2127			260						265					270		
2130	Pro	Thr	Ser	Asn	Leu	Ser	Lys	Glu	Tyr	Trp	Asn	Tyr	Arg	Ser	Tyr	Asp
2131			275					280					285			
2134	Asn	Asn	Ile	Gly	Thr	Pro	Tyr	Glu	Asn	Ala	Val	Pro	Phe	Met	Pro	Asn
2135		290					295					300				
2138	Leu	Lys	Ala	Tyr	Pro	Lys	Pro	Thr	Lys	Thr	Ala	Ser	Asp	Lys	Ala	Glu
2139	305					310					315				320	
2142	Asn	Lys	Ile	Ser	Ser	Ala	Lys	Asn	Lys	Ile	Val	Ser	Asn	Phe	Tyr	Phe
2143				325						330					335	
2146	Gly	Gly	Gln	Ala	Tyr	Gln	Pro	Gly	Thr	Ile	Ile	Ile	Lys	Phe	Asn	Glu
2147			340						345					350		
2150	Glu	Ile	Asp	Glu	Thr	Cys	Ala	Tyr	Ser	Ile	Thr	Phe	Asn	Phe	Gly	Trp
2151			355					360						365		

RAW SEQUENCE LISTING

DATE: 09/18/2002

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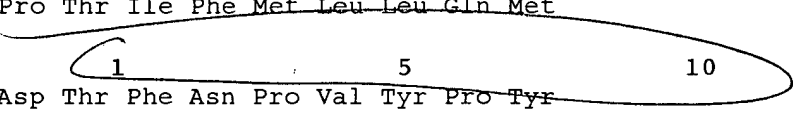
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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

2154 Gly Lys Val Tyr Asp Asn Pro Phe Pro Phe Asp Thr Thr Ser Phe Thr
 2155 370 375 380
 2158 Phe Ser Tyr Ile Ala Gln Glu
 2159 385 390
 2161 <210> SEQ ID NO: 44
 2162 <211> LENGTH: 338
 2163 <212> TYPE: PRT
 2164 <213> ORGANISM: adenoviridae
 2166 <220> FEATURE:
 2167 <221> NAME/KEY: VARIANT
 2168 <222> LOCATION: (1)..(338)
 2169 <223> OTHER INFORMATION: Serotype 34 fiber protein
 2171 <400> SEQUENCE: 44
 2173 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 2174



2177 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
 2178 20 25 30
 2181 Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
 2182 35 40 45
 2185 Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
 2186 50 55 60
 2189 Cys Leu Thr Pro Leu Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
 2190 65 70 75 80
 2193 Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Lys Asn
 2194 85 90 95
 2197 Ile Arg Ala Thr Thr Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
 2198 100 105 110
 2201 Thr Ile Gly Asn Gly Leu Glu Thr Gln His Asn Lys Leu Cys Ala Lys
 2202 115 120 125
 2205 Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
 2206 130 135 140
 2209 Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Pro Asn Cys Gln
 2210 145 150 155 160
 2213 Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
 2214 165 170 175
 2217 Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
 2218 180 185 190
 2221 Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
 2222 195 200 205
 2225 Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Asp Glu Ser
 2226 210 215 220
 2229 Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
 2230 225 230 235 240
 2233 Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
 2234 245 250 255
 2237 Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys
 2238 260 265 270
 2241 Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
 2242 275 280 285

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PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002
TIME: 14:46:57

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

```

2245 Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
2246      290      295      300
2249 Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Lys Gln His
2250 305      310      315      320
2253 Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Ile Glu Asp
2254      325      330      335
2257 Asp Asn
2259 <210> SEQ ID NO: 45
2260 <211> LENGTH: 338
2261 <212> TYPE: PRT
2262 <213> ORGANISM: adenoviridae
2264 <220> FEATURE:
2265 <221> NAME/KEY: VARIANT
2267 <222> LOCATION: (1)..(338)
2268 <223> OTHER INFORMATION: Serotype 35 fiber protein
2270 <400> SEQUENCE: 45
2272 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2273
      1      5      10
2276 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
2277      20      25      30
2280 Glu Asp Glu Ser Thr Ser Gln His Pro Phe Ile Asn Pro Gly Phe Ile
2281      35      40      45
2284 Ser Pro Asn Gly Phe Thr Gln Ser Pro Asp Gly Val Leu Thr Leu Lys
2285      50      55      60
2288 Cys Leu Thr Pro Leu Thr Thr Thr Gly Gly Ser Leu Gln Leu Lys Val
2289 65      70      75      80
2292 Gly Gly Gly Leu Thr Val Asp Asp Thr Asp Gly Thr Leu Gln Glu Asn
2293      85      90      95
2296 Ile Arg Ala Thr Ala Pro Ile Thr Lys Asn Asn His Ser Val Glu Leu
2297      100      105      110
2300 Ser Ile Gly Asn Gly Leu Glu Thr Gln Asn Asn Lys Leu Cys Ala Lys
2301      115      120      125
2304 Leu Gly Asn Gly Leu Lys Phe Asn Asn Gly Asp Ile Cys Ile Lys Asp
2305      130      135      140
2308 Ser Ile Asn Thr Leu Trp Thr Gly Ile Asn Pro Pro Asn Cys Gln
2309 145      150      155      160
2312 Ile Val Glu Asn Thr Asn Thr Asn Asp Gly Lys Leu Thr Leu Val Leu
2313      165      170      175
2316 Val Lys Asn Gly Gly Leu Val Asn Gly Tyr Val Ser Leu Val Gly Val
2317      180      185      190
2320 Ser Asp Thr Val Asn Gln Met Phe Thr Gln Lys Thr Ala Asn Ile Gln
2321      195      200      205
2324 Leu Arg Leu Tyr Phe Asp Ser Ser Gly Asn Leu Leu Thr Glu Glu Ser
2325      210      215      220
2328 Asp Leu Lys Ile Pro Leu Lys Asn Lys Ser Ser Thr Ala Thr Ser Glu
2329 225      230      235      240
2332 Thr Val Ala Ser Ser Lys Ala Phe Met Pro Ser Thr Thr Ala Tyr Pro
2333      245      250      255
2336 Phe Asn Thr Thr Thr Arg Asp Ser Glu Asn Tyr Ile His Gly Ile Cys

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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

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2337          260          265          270
2340 Tyr Tyr Met Thr Ser Tyr Asp Arg Ser Leu Phe Pro Leu Asn Ile Ser
2341          275          280          285
2344 Ile Met Leu Asn Ser Arg Met Ile Ser Ser Asn Val Ala Tyr Ala Ile
2345          290          295          300
2348 Gln Phe Glu Trp Asn Leu Asn Ala Ser Glu Ser Pro Glu Ser Asn Ile
2349 305          310          315          320
2352 Met Thr Leu Thr Thr Ser Pro Phe Phe Phe Ser Tyr Ile Thr Glu Asp
2353          325          330          335
2356 Asp Asn
2358 <210> SEQ ID NO: 46
2359 <211> LENGTH: 392
2360 <212> TYPE: PRT
2361 <213> ORGANISM: adenoviridae
2363 <220> FEATURE:
2364 <221> NAME/KEY: VARIANT
2365 <222> LOCATION: (1)..(392)
2366 <223> OTHER INFORMATION: Serotype 36 fiber protein
2368 <400> SEQUENCE: 46
2370 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met
E--> 2371
          1          5          10          15
2374 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
E--> 2375          20          25          30
2378 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
E--> 2379          35          40          45
2382 Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
E--> 2383          50          55          60
2386 Leu Ala Asp Pro Ile Ala Ile Val Asn Gly Asp Val Ser Leu Lys Val
E--> 2387 65          70          75          80
2390 Gly Gly Gly Leu Thr Val Glu Gln Asp Ser Gly Lys Leu Lys Val Asn
E--> 2391          85          90          95
2394 Pro Lys Ile Pro Leu Gln Val Val Asn Asp Gln Leu Glu Leu Ala Thr
E--> 2395          100          105          110
2398 Asp Lys Pro Phe Lys Ile Glu Asn Asn Lys Leu Ala Leu Asp Val Gly
E--> 2399          115          120          125
2402 His Gly Leu Lys Val Ile Asp Lys Thr Ile Ser Asp Leu Gln Gly Leu
E--> 2403          130          135          140
2406 Val Gly Lys Leu Val Val Leu Thr Gly Val Gly Ile Gly Thr Glu Thr
E--> 2407 145          150          155          160
2410 Leu Lys Asp Lys Asn Asp Lys Val Ile Gly Ser Ala Val Asn Val Arg
E--> 2411          165          170          175
2414 Leu Gly Lys Asp Gly Gly Leu Asp Phe Asn Lys Lys Gly Asp Leu Val
E--> 2415          180          185          190
2418 Ala Trp Asn Arg Tyr Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro Asp
E--> 2419          195          200          205
2422 Pro Ser Pro Asn Cys Lys Val Ser Glu Ala Lys Asp Ser Lys Leu Thr
E--> 2423          210          215          220
2426 Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Ser Val Ala Leu
E--> 2427 225          230          235          240

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RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

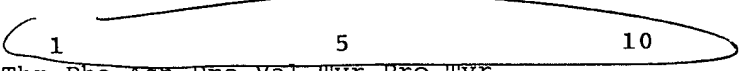
Output Set: N:\CRF4\09182002\J040949.raw

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      2430 Leu Ile Val Lys Gly Lys Tyr Gln Thr Ile Ser Glu Ser Thr Ile Pro
E--> 2431          245          250          255
      2434 Lys Asp Gln Arg Asn Phe Ser Val Lys Leu Met Phe Asp Glu Lys Gly
E--> 2435          260          265          270
      2438 Lys Leu Leu Asp Lys Ser Ser Leu Asp Lys Glu Tyr Trp Asn Phe Arg
E--> 2439          275          280          285
      2442 Ser Asn Asp Ser Val Val Gly Thr Ala Tyr Asp Asn Ala Val Pro Phe
E--> 2443          290          295          300
      2446 Met Pro Asn Leu Lys Ala Tyr Pro Lys Asn Thr Thr Thr Ser Ser Thr
E--> 2447 305          310          315          320
      2450 Asn Pro Asp Asp Lys Ile Ser Ala Gly Lys Lys Asn Ile Val Ser Asn
E--> 2451          325          330          335
      2454 Val Tyr Leu Glu Gly Arg Val Tyr Gln Pro Val Ala Leu Thr Val Lys
E--> 2455          340          345          350
      2458 Phe Asn Ser Glu Asn Asp Cys Ala Tyr Ser Ile Thr Phe Asp Phe Val
E--> 2459          355          360          365
      2462 Trp Ser Lys Thr Tyr Glu Ser Pro Val Ala Phe Asp Ser Ser Ser Phe
E--> 2463          370          375          380
      2466 Thr Phe Ser Tyr Ile Ala Gln Glu
E--> 2467 385          390
      2469 <210> SEQ ID NO: 47
      2470 <211> LENGTH: 380
      2471 <212> TYPE: PRT
      2472 <213> ORGANISM: adenoviridae
      2474 <220> FEATURE:
      2475 <221> NAME/KEY: VARIANT
      2476 <222> LOCATION: (1)..(380)
      2477 <223> OTHER INFORMATION: Serotype 37 fiber protein
      2479 <400> SEQUENCE: 47
      2481 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

```

E--> 2482



```

      2485 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr
      2486          20          25          30
      2489 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Leu Thr Pro Pro Phe Val
      2490          35          40          45
      2493 Ser Ser Asp Gly Phe Lys Asn Phe Pro Pro Gly Val Leu Ser Leu Lys
      2494          50          55          60
      2497 Leu Ala Asp Pro Ile Thr Ile Thr Asn Gly Asp Val Ser Leu Lys Val
      2498 65          70          75          80
      2501 Gly Gly Gly Leu Thr Leu Gln Asp Gly Ser Leu Thr Val Asn Pro Lys
      2502          85          90          95
      2505 Ala Pro Leu Gln Val Asn Thr Asp Lys Lys Leu Glu Leu Ala Tyr Asp
      2506          100         105         110
      2509 Asn Pro Phe Glu Ser Ser Ala Asn Lys Leu Ser Leu Lys Val Gly His
      2510          115         120         125
      2513 Gly Leu Lys Val Leu Asp Glu Lys Ser Ala Ala Gly Leu Lys Asp Leu
      2514          130         135         140
      2517 Ile Gly Lys Leu Val Val Leu Thr Gly Lys Gly Ile Gly Thr Glu Asn
      2518 145          150         155         160

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Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

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2521 Leu Glu Asn Thr Asp Gly Ser Ser Arg Gly Ile Gly Ile Asn Val Arg
2522                165                170                175
2525 Ala Arg Glu Gly Leu Thr Phe Asp Asn Asp Gly Tyr Leu Val Ala Trp
2526                180                185                190
2529 Asn Pro Lys Tyr Asp Leu Arg Thr Leu Trp Thr Thr Pro Asp Thr Ser
2530                195                200                205
2533 Pro Asn Cys Thr Ile Ala Gln Asp Lys Asp Ser Lys Leu Thr Leu Val
2534                210                215                220
2537 Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser Leu Ile Val
2538 225                230                235                240
2541 Val Ala Gly Lys Tyr His Ile Ile Asn Asn Lys Thr Asn Pro Lys Ile
2542                245                250                255
2545 Lys Ser Phe Thr Ile Lys Leu Leu Phe Asn Lys Asn Gly Val Leu Leu
2546                260                265                270
2549 Asp Asn Ser Asn Leu Gly Lys Ala Tyr Trp Asn Phe Arg Ser Gly Asn
2550                275                280                285
2553 Ser Asn Val Ser Thr Ala Tyr Glu Lys Ala Ile Gly Phe Met Pro Asn
2554                290                295                300
2557 Leu Val Ala Val Ser Lys Pro Ser Asn Ser Lys Lys Tyr Ala Arg Asp
2558 305                310                315                320
2561 Ile Val Tyr Gly Asn Ile Tyr Leu Gly Gly Lys Pro Asp Gln Pro Gly
2562                325                330                335
2565 Val Ile Lys Thr Thr Phe Asn Gln Glu Thr Gly Cys Glu Tyr Ser Ile
2566                340                345                350
2569 Thr Phe Asn Phe Ser Trp Ser Lys Thr Tyr Glu Asn Val Glu Phe Glu
2570                355                360                365
2573 Thr Thr Ser Phe Thr Phe Ser Tyr Ile Ala Gln Glu
2574                370                375                380

```

2576 <210> SEQ ID NO: 48

2577 <211> LENGTH: 391

2578 <212> TYPE: PRT

2579 <213> ORGANISM: adenoviridae

2581 <220> FEATURE:

2582 <221> NAME/KEY: VARIANT

2583 <222> LOCATION: (1)..(391)

2584 <223> OTHER INFORMATION: Serotype 39 fiber protein

2586 <220> FEATURE:

2587 <221> NAME/KEY: MISC_FEATURE

2588 <222> LOCATION: (43)

2589 <223> OTHER INFORMATION: 'Xaa' at position 43 indicates an unidentified amino acid
 2590 due to unidentified nucleotide(s)

2592 <220> FEATURE:

2593 <221> NAME/KEY: MISC_FEATURE

2594 <222> LOCATION: (49)

2595 <223> OTHER INFORMATION: 'Xaa' at position 49 indicates an unidentified amino acid
 2596 due to unidentified nucleotide(s)

2598 <220> FEATURE:

2599 <221> NAME/KEY: MISC_FEATURE

2600 <222> LOCATION: (97)

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

2601 <223> OTHER INFORMATION: 'Xaa' at position 97 indicates an unidentified amino acid
 2602 due to unidentified nucleotide(s)
 2604 <220> FEATURE:
 2605 <221> NAME/KEY: MISC_FEATURE
 2606 <222> LOCATION: (192)
 2607 <223> OTHER INFORMATION: 'Xaa' at position 192 indicates an unidentified amino acid
 2608 due to unidentified nucleotide(s)
 2610 <400> SEQUENCE: 48

2612 Ser Cys Ser Cys Pro Ser Ala Pro Thr Ile Phe Met Leu Leu Gln Met

E--> 2613

2616 Lys Arg Ala Arg Pro Ser Glu Asp Thr Phe Asn Pro Val Tyr Pro Tyr

2617 20 25 30

W--> 2620 Gly Tyr Ala Arg Asn Gln Asn Ile Pro Phe Xaa Thr Pro Pro Phe Val

2621 35 40 45

W--> 2624 Xaa Ser Asp Gly Phe Gln Asn Phe Pro Pro Gly Val Leu Ser Leu Lys

2625 50 55 60

2628 Leu Ala Asp Pro Ile Thr Ile Ala Asn Gly Asn Val Ser Leu Lys Val

2629 65 70 75 80

2632 Gly Gly Gly Leu Thr Leu Glu Gln Asp Ser Gly Lys Leu Ile Val Asn

2633 85 90 95

W--> 2636 Xaa Lys Ala Pro Leu Gln Val Ala Asn Asp Lys Leu Glu Leu Ser Tyr

2637 100 105 110

2640 Ala Asp Pro Phe Glu Thr Ser Ala Asn Lys Leu Ser Leu Lys Val Gly

2641 115 120 125

2644 His Gly Leu Lys Val Leu Asp Glu Lys Asn Ala Gly Gly Leu Lys Asp

2645 130 135 140

2648 Leu Ile Gly Thr Leu Val Val Leu Thr Gly Lys Gly Ile Gly Val Glu

2649 145 150 155 160

2652 Glu Leu Lys Asn Ala Asp Asn Thr Asn Arg Gly Val Gly Ile Asn Val

2653 165 170 175

W--> 2656 Arg Leu Gly Lys Asp Gly Gly Leu Ser Phe Asp Lys Lys Gly Asp Xaa

2657 180 185 190

2660 Val Ala Trp Asn Lys His Asp Asp Arg Arg Thr Leu Trp Thr Thr Pro

2661 195 200 205

2664 Asp Pro Ser Pro Asn Cys Thr Ile Asp Glu Glu Arg Asp Ser Lys Leu

2665 210 215 220

2668 Thr Leu Val Leu Thr Lys Cys Gly Ser Gln Ile Leu Ala Asn Val Ser

2669 225 230 235 240

2672 Leu Leu Val Val Lys Gly Lys Phe Ser Asn Ile Asn Asn Thr Asn

2673 245 250 255

2676 Pro Thr Asp Lys Lys Ile Thr Val Lys Leu Leu Phe Asn Glu Lys Gly

2677 260 265 270

2680 Val Leu Met Asp Ser Ser Ser Leu Lys Lys Glu Tyr Trp Asn Tyr Arg

2681 275 280 285

2684 Asn Asp Asn Ser Thr Val Ser Gln Ala Tyr Asp Asn Ala Val Pro Phe

2685 290 295 300

2688 Met Pro Asn Ile Lys Ala Tyr Pro Lys Pro Thr Thr Asp Thr Ser Ala

2689 305 310 315 320

2692 Lys Pro Glu Asp Lys Lys Ser Ala Ala Lys Arg Tyr Ile Val Ser Asn

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

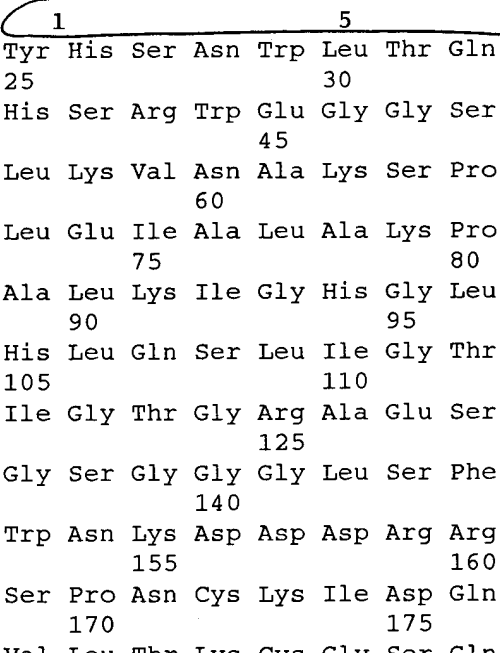
Output Set: N:\CRF4\09182002\J040949.raw

```

2693          325          330          335
2696 Val Tyr Ile Gly Gly Leu Pro Asp Lys Thr Val Val Ile Thr Ile Lys
2697          340          345          350
2700 Leu Asn Ala Glu Thr Glu Ser Ala Tyr Ser Met Thr Phe Glu Phe Thr
2701          355          360          365
2704 Trp Ala Lys Thr Phe Glu Asn Leu Gln Phe Asp Ser Ser Ser Phe Thr
2705          370          375          380
2708 Phe Ser Tyr Ile Ala Gln Glu
2709 385          390
2711 <210> SEQ ID NO: 49
2712 <211> LENGTH: 339
2713 <212> TYPE: PRT
2714 <213> ORGANISM: adenoviridae
2716 <220> FEATURE:
2717 <221> NAME/KEY: VARIANT
2718 <222> LOCATION: (1)..(339)
2719 <223> OTHER INFORMATION: Serotype 39 fiber protein
2721 <400> SEQUENCE: 49
2723 Ile Arg Ile Ser Pro Ser Ser Leu Pro Pro Leu Ser Pro Pro Met Asp

```

E--> 2724



```

2727 Ser Lys Thr Ser Pro Leu Gly Cys Tyr His Ser Asn Trp Leu Thr Gln
2728          20          25          30
2731 Ser Pro Ser Pro Met Gly Met Ser His Ser Arg Trp Glu Gly Gly Ser
2732          35          40          45
2735 Pro Trp Gln Glu Gly Thr Gly Asp Leu Lys Val Asn Ala Lys Ser Pro
2736          50          55          60
2739 Leu Gln Val Ala Thr Asn Lys Gln Leu Glu Ile Ala Leu Ala Lys Pro
2740 65          70          75          80
2743 Phe Glu Glu Lys Asp Gly Lys Leu Ala Leu Lys Ile Gly His Gly Leu
2744          85          90          95
2747 Ala Val Val Asp Glu Asn His Thr His Leu Gln Ser Leu Ile Gly Thr
2748          100         105         110
2751 Leu Val Ile Leu Thr Gly Lys Gly Ile Gly Thr Gly Arg Ala Glu Ser
2752          115         120         125
2755 Gly Gly Thr Ile Asp Val Arg Leu Gly Ser Gly Gly Gly Leu Ser Phe
2756          130         135         140
2759 Asp Lys Asp Gly Asn Leu Val Ala Trp Asn Lys Asp Asp Asp Arg Arg
2760 145         150         155         160
2763 Thr Leu Trp Thr Thr Pro Asp Pro Ser Pro Asn Cys Lys Ile Asp Gln
2764          165         170         175
2767 Asp Lys Asp Ser Lys Leu Thr Phe Val Leu Thr Lys Cys Gly Ser Gln
2768          180         185         190
2771 Ile Leu Ala Asn Met Ser Leu Leu Val Val Lys Gly Lys Phe Ser Met
2772          195         200         205
2775 Ile Asn Asn Lys Val Asn Gly Thr Asp Asp Tyr Lys Lys Phe Thr Ile
2776          210         215         220
2779 Lys Leu Leu Phe Asp Glu Lys Gly Val Leu Leu Lys Asp Ser Ser Leu
2780 225         230         235         240
2783 Asp Lys Glu Tyr Trp Asn Tyr Arg Ser Asn Asn Asn Asn Val Gly Ser

```

Use of n and/or Xaa has been detected in the Sequence Listing.
 Review the Sequence Listing to insure a corresponding
 explanation is presented in the <220> to <223> fields of
 each sequence using n or Xaa.

The types of errors shown exist throughout
 the Sequence Listing. Please check subsequent
 sequences for similar errors.

RAW SEQUENCE LISTING

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:57

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

2784		245		250		255
2787	Ala Tyr Glu Glu Ala Val Gly Phe Met Pro Ser Thr Thr Ala Tyr Pro					
2788		260		265		270
2791	Lys Pro Pro Thr Pro Pro Thr Asn Pro Thr Thr Pro Leu Glu Lys Ser					
2792		275		280		285
2795	Gln Ala Lys Asn Lys Tyr Val Ser Asn Val Tyr Leu Gly Gly Gln Ala					
2796		290		295		300
2799	Gly Asn Pro Val Ala Thr Thr Val Ser Phe Asn Lys Glu Thr Gly Cys					
2800	305		310		315	320
2803	Thr Tyr Ser Ile Thr Phe Asp Phe Ala Trp Asn Lys Thr Tyr Glu Asn					
2804		325		330		335
2807	Val Gln Cys					

RAW SEQUENCE LISTING ERROR SUMMARY
PATENT APPLICATION: US/10/040,949

DATE: 09/18/2002
TIME: 14:46:58

Input Set : A:\Sequence Listing.txt
Output Set: N:\CRF4\09182002\J040949.raw

Invalid Line Length:

The rules require that a line not exceed 72 characters in length. This includes spaces.

Seq#:30; Line(s) 627,663
Seq#:31; Line(s) 735
Seq#:32; Line(s) 878
Seq#:33; Line(s) 989
Seq#:34; Line(s) 1077
Seq#:35; Line(s) 1176
Seq#:36; Line(s) 1276
Seq#:37; Line(s) 1393
Seq#:38; Line(s) 1500
Seq#:39; Line(s) 1597
Seq#:40; Line(s) 1705
Seq#:41; Line(s) 1841
Seq#:42; Line(s) 1952
Seq#:43; Line(s) 2063
Seq#:44; Line(s) 2174
Seq#:45; Line(s) 2273
Seq#:46; Line(s) 2371
Seq#:47; Line(s) 2482
Seq#:48; Line(s) 2613
Seq#:49; Line(s) 2724
Seq#:50; Line(s) 2828
Seq#:51; Line(s) 2947
Seq#:52; Line(s) 3042
Seq#:53; Line(s) 3141
Seq#:54; Line(s) 3240
Seq#:55; Line(s) 3339
Seq#:56; Line(s) 3450
Seq#:57; Line(s) 3555
Seq#:58; Line(s) 3666

VERIFICATION SUMMARY

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:58

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

L:14 M:271 C: Current Filing Date differs, Replaced Current Filing Date
L:69 M:283 W: Missing Blank Line separator, <220> field identifier
L:108 M:254 E: No. of Bases conflict, LENGTH:Input:0 Counted:50 SEQ:5
L:627 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:30
M:332 Repeated in SeqNo=30
L:735 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:31
L:877 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:0
L:878 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:32
L:881 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:16
L:885 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:32
L:889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:48
L:973 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32 after pos.:384
L:989 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:33
L:1077 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:34
L:1176 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:35
L:1276 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:36
L:1393 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:37
L:1424 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:37 after pos.:128
L:1500 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:38
L:1597 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:39
L:1705 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:40
M:332 Repeated in SeqNo=40
L:1841 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:41
L:1844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:16
M:332 Repeated in SeqNo=41
L:1848 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:32
L:1852 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:48
L:1864 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:96
L:1876 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:144
L:1884 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:41 after pos.:176
L:1952 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:42
M:332 Repeated in SeqNo=42
L:2063 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:43
L:2174 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:44
L:2273 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:45
L:2371 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:46
M:332 Repeated in SeqNo=46
L:2482 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:47
L:2613 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:48
L:2620 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:32
L:2624 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:48
L:2636 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:96
L:2656 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:48 after pos.:176
L:2724 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:49
L:2828 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:50
M:332 Repeated in SeqNo=50
L:2883 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:50 after pos.:224
L:2946 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:0

VERIFICATION SUMMARY

DATE: 09/18/2002

PATENT APPLICATION: US/10/040,949

TIME: 14:46:58

Input Set : A:\Sequence Listing.txt

Output Set: N:\CRF4\09182002\J040949.raw

L:2947 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:51
M:332 Repeated in SeqNo=51
L:3002 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:51 after pos.:224
L:3042 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:52
M:332 Repeated in SeqNo=52
L:3141 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:53
M:332 Repeated in SeqNo=53
L:3240 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:54
M:332 Repeated in SeqNo=54
L:3339 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:55
M:332 Repeated in SeqNo=55
L:3450 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:56
L:3555 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:57
M:332 Repeated in SeqNo=57
L:3618 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:57 after pos.:256
L:3666 M:332 E: (32) Invalid/Missing Amino Acid Numbering, SEQ ID:58
M:332 Repeated in SeqNo=58

Raw Sequence Listing Error Summary

ERROR DETECTED

SUGGESTED CORRECTION

SERIAL NUMBER: 10/040,949

ATTN: NEW RULES CASES: PLEASE DISREGARD ENGLISH "ALPHA" HEADERS, WHICH WERE INSERTED BY PTO SOFTWARE

- 1 Wrapped Nucleics
 Wrapped Aminos The number/text at the end of each line "wrapped" down to the next line. This may occur if your file was retrieved in a word processor after creating it. Please adjust your right margin to .3; this will prevent "wrapping."
- 2 Invalid Line Length The rules require that a line not exceed 72 characters in length. This includes white spaces.
- 3 ✓ Misaligned Amino
 Numbering The numbering under each 5th amino acid is misaligned. Do not use tab codes between numbers; use space characters, instead.
- 4 Non-ASCII The submitted file was not saved in ASCII(DOS) text, as required by the Sequence Rules. Please ensure your subsequent submission is saved in ASCII text.
- 5 Variable Length Sequence(s) contain n's or Xaa's representing more than one residue. Per Sequence Rules, each n or Xaa can only represent a single residue. Please present the maximum number of each residue having variable length and indicate in the <220>-<223> section that some may be missing.
- 6 PatentIn 2.0
 "bug" A "bug" in PatentIn version 2.0 has caused the <220>-<223> section to be missing from amino acid sequences(s) . Normally, PatentIn would automatically generate this section from the previously coded nucleic acid sequence. Please manually copy the relevant <220>-<223> section to the subsequent amino acid sequence. This applies to the mandatory <220>-<223> sections for Artificial or Unknown sequences.
- 7 Skipped Sequences
 (OLD RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence:
 (2) INFORMATION FOR SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 (i) SEQUENCE CHARACTERISTICS: (Do not insert any subheadings under this heading)
 (xi) SEQUENCE DESCRIPTION:SEQ ID NO:X: (insert SEQ ID NO where "X" is shown)
 This sequence is intentionally skipped

 Please also adjust the "(ii) NUMBER OF SEQUENCES:" response to include the skipped sequences.
- 8 Skipped Sequences
 (NEW RULES) Sequence(s) missing. If intentional, please insert the following lines for each skipped sequence.
 <210> sequence id number
 <400> sequence id number
 000
- 9 Use of n's or Xaa's
 (NEW RULES) Use of n's and/or Xaa's have been detected in the Sequence Listing.
 Per 1.823 of Sequence Rules, use of <220>-<223> is MANDATORY if n's or Xaa's are present.
 In <220> to <223> section, please explain location of n or Xaa; and which residue n or Xaa represents.
- 10 Invalid <213>
 Response Per 1.823 of Sequence Rules, the only valid <213> responses are: Unknown, Artificial Sequence, or scientific name (Genus/species). <220>-<223> section is required when <213> response is Unknown or is Artificial Sequence
- 11 Use of <220> Sequence(s) missing the <220> "Feature" and associated numeric identifiers and responses.
 Use of <220> to <223> is MANDATORY if <213> "Organism" response is "Artificial Sequence" or "Unknown." Please explain source of genetic material in <220> to <223> section.
 (See "Federal Register," 06/01/1998, Vol. 63, No. 104, pp. 29631-32) (Sec. 1.823 of Sequence Rules)
- 12 PatentIn 2.0
 "bug" Please do not use "Copy to Disk" function of PatentIn version 2.0. This causes a corrupted file, resulting in missing mandatory numeric identifiers and responses (as indicated on raw sequence listing). Instead, please use "File Manager" or any other manual means to copy file to floppy disk.
- 13 Misuse of n n can only be used to represent a single nucleotide in a nucleic acid sequence. N is not used to represent any value not specifically a nucleotide.